

Jie Bao

PERSONAL INFORMATION

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EDUCATION

FALL 2019 - SUMMER 2021	Concordia University , Montreal, Quebec, Canada <i>Master of Applied Science, Mechanical Engineering</i> , GPA: 3.98/4.3 Thesis: Machine Learning Techniques for Turbulence Modeling Supervisor: Dr. Brian Vermeire Applied Machine Learning - COMP551 (McGill Campus IUT), <i>Grade: A</i>
FALL 2015 - WINTER 2019	Concordia University , Montreal, Quebec, Canada <i>Bachelor of Engineering, Aerospace Engineering</i> , GPA: 3.25/4.3
WINTER 2018	Embry-Riddle Aeronautical University , Daytona Beach, Florida <i>Exchange Semester Abroad, Engineering</i> GPA: 3.7/4.0

COMPUTER SKILLS

PYTHON, TENSORFLOW, MATLAB, TABLEAU, CSS/JAVASCRIPT, LINUX, BASH/SHELL, MS OFFICE, CATIA, ANSYS

WORK EXPERIENCE

CURRENT	Graduate Student Researcher , COMPUTATIONAL AEROSPACE LAB <i>Turbulence Modeling Technique using Machine Learning Techniques</i> Performed feature quality analysis using algorithm such as Relief. Data cleaning, acquisition and analysis using Matlab and Python. Created an end-to-end ML training pipeline for turbulent production and dissipation values. Achieved over 90% R^2 accuracy. Currently, working on analysing the NACA 0012 airfoil. Check out the progress on website and my other works.
SUMMER 2018	Intern in Structure Design & Standard , BOMBARDIER AEROSPACE <i>Cabin Window Trade Study on Next-Gen Business Jet</i> Conduct a cabin window trade study with respect to § 25.807 for future business jet program, perform cost & weight estimation for Product Planning, benchmark with competition in the same aircraft segment, proposed cabin window position, installation type, and size recommendation.
SUMMER 2017	R&D Intern in Advanced Systems , BOMBARDIER AEROSPACE <i>Hydraulic System Modeling using MBSE</i> modeling of the GLOBAL 7500 hydraulic system using the CAPELLA software (operational architecture down to physical architecture). Gained a comprehensive understanding of the hydraulic system. Improved system engineering MBSE approach for aircraft design Developed modeling usage standards. Presented to subject-matter experts during bi-weekly workshops.

TEACHING ASSISTANT

CURRENT	AERO 490 - Final Year Capstone Aerospace Engineering Design Project <i>Supervised by Dr. Jonathan Liscouët</i> Supervise the conceptual design of a medical organs transporting drone. Motivating the student to think critically and provide guidelines on how to solve technical questions. Help online teaching transition.
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ACADEMIC PROJECT

2018-2019	AERO 490 - Final Year Capstone Aerospace Engineering Design Project <i>Supervised by Dr. Catharine Marsden</i> Conceptual design of an arctic transport aircraft. Market analysis and develop business case. Perform trade studies and constraint diagram. Aircraft static & dynamic stability compliance for airworthiness.
FALL 2017	AERO 390 - Preliminary Rudder System Design <i>Supervised by Dr. Susan Liscouët-Hanke</i> Perform the safety and reliability assessment - ARP 4761. Define Aircraft and System level requirements using interdisciplinary approach - RFLP method. Use 3DEXperience software to track the requirements and to model the rudder system physical level.

ENGINEERING COMPETITION

FALL 2018	Engineering and Computer Science Association Competitions Week <i>Senior Design - Concordia University, Montreal, QC</i> Designed and assembled a remotely controlled car using an Arduino board and other provided material. Awarded 3 rd position.
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CERTIFICATE

MAY 2016	Aircraft Familiarization Training (312h) at L'École National d'Aérotechnique
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LANGUAGES

FRENCH:	Fluent
ENGLISH:	Fluent
CHINESE (MANDARIN):	Fluent
GERMAN:	Basic Knowledge

INTERESTS AND ACTIVITIES

World History, Current World Affairs, Avid Tennis player, Running, Programming